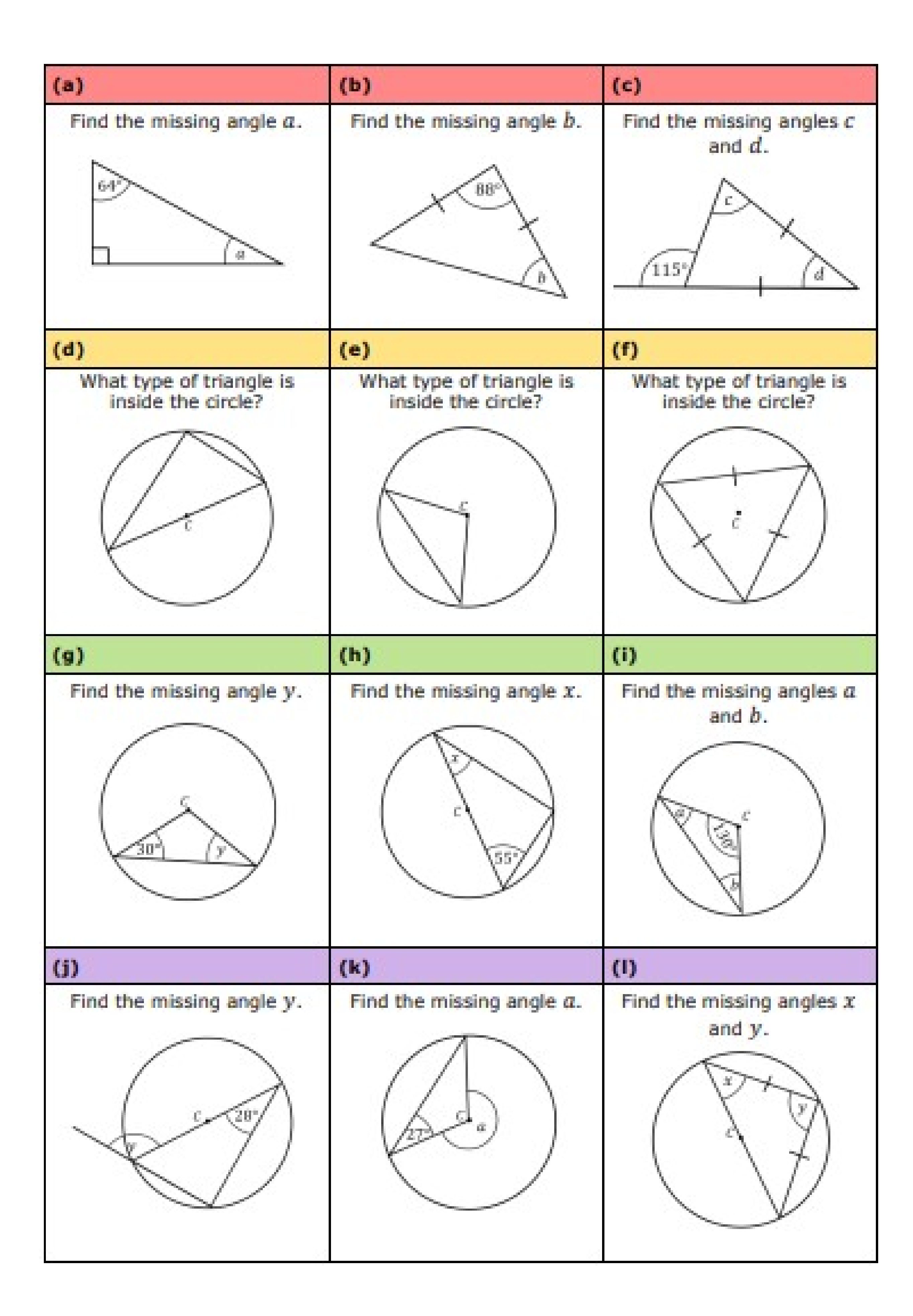
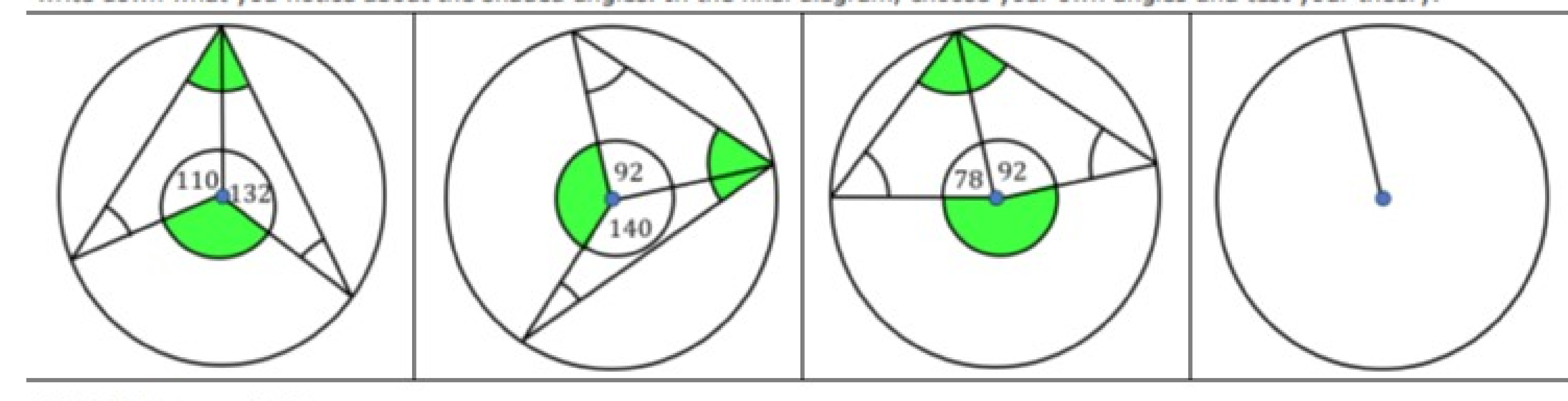
(4) Circle Theorems and Quadrilaterals

Do now



(a)	**(b)**	**(c)**
Find the missing angle a.	Find the missing angle b.	Find the missing angles c and d.
(d)	**(e)**	**(f)**
What type of triangle is inside the circle?	What type of triangle is inside the circle?	What type of triangle is inside the circle?
(g)	**(h)**	**(i)**
Find the missing angle y.	Find the missing angle x.	Find the missing angles a and b.
(j)	**(k)**	**(l)**
Find the missing angle y.	Find the missing angle a.	Find the missing angles x and y.

The next three diagrams show two joined isosceles triangles that fit together inside a full circle. Calculate all marked angles and write down what you notice about the shaded angles. In the final diagram, choose your own angles and test your theory.

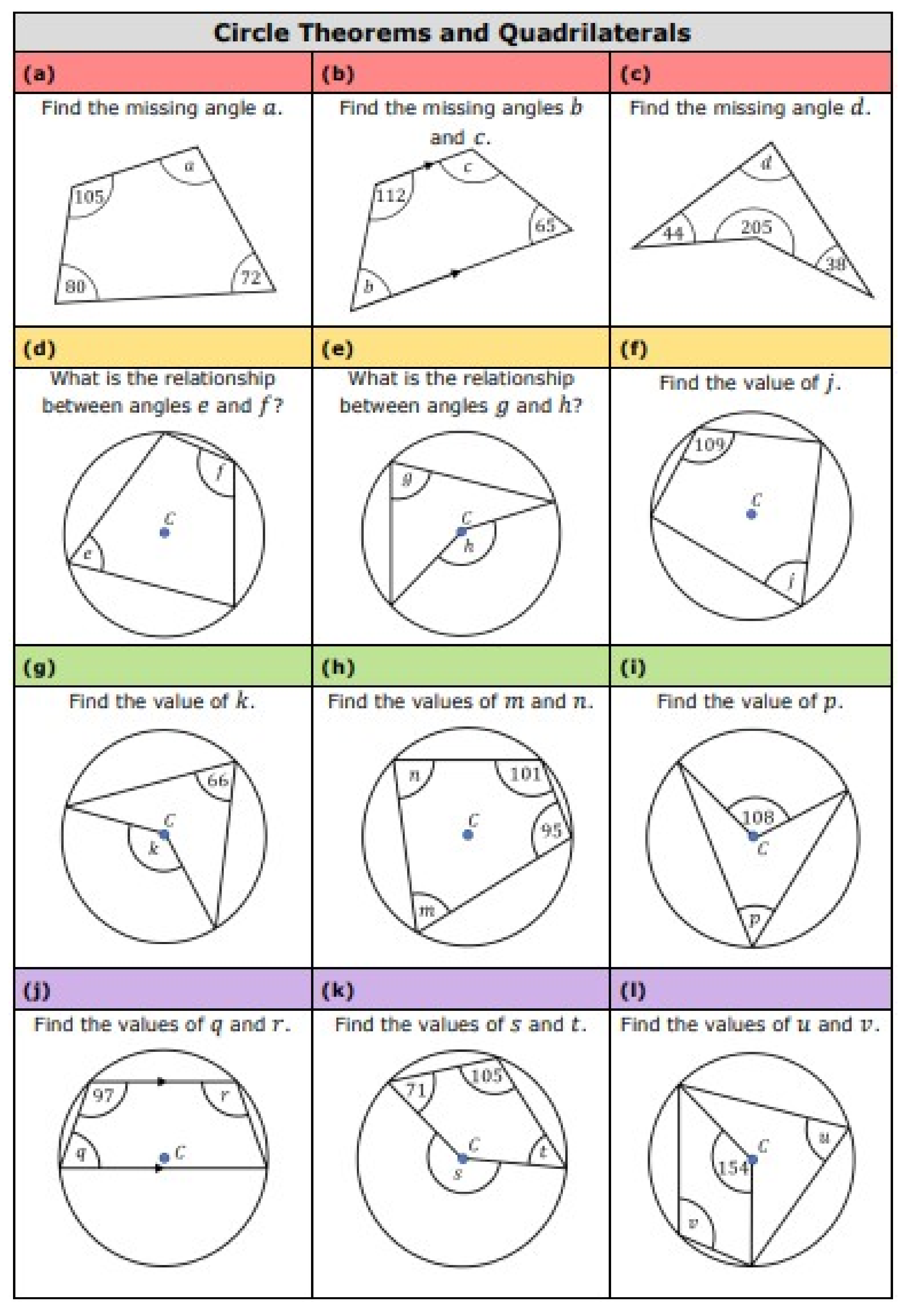


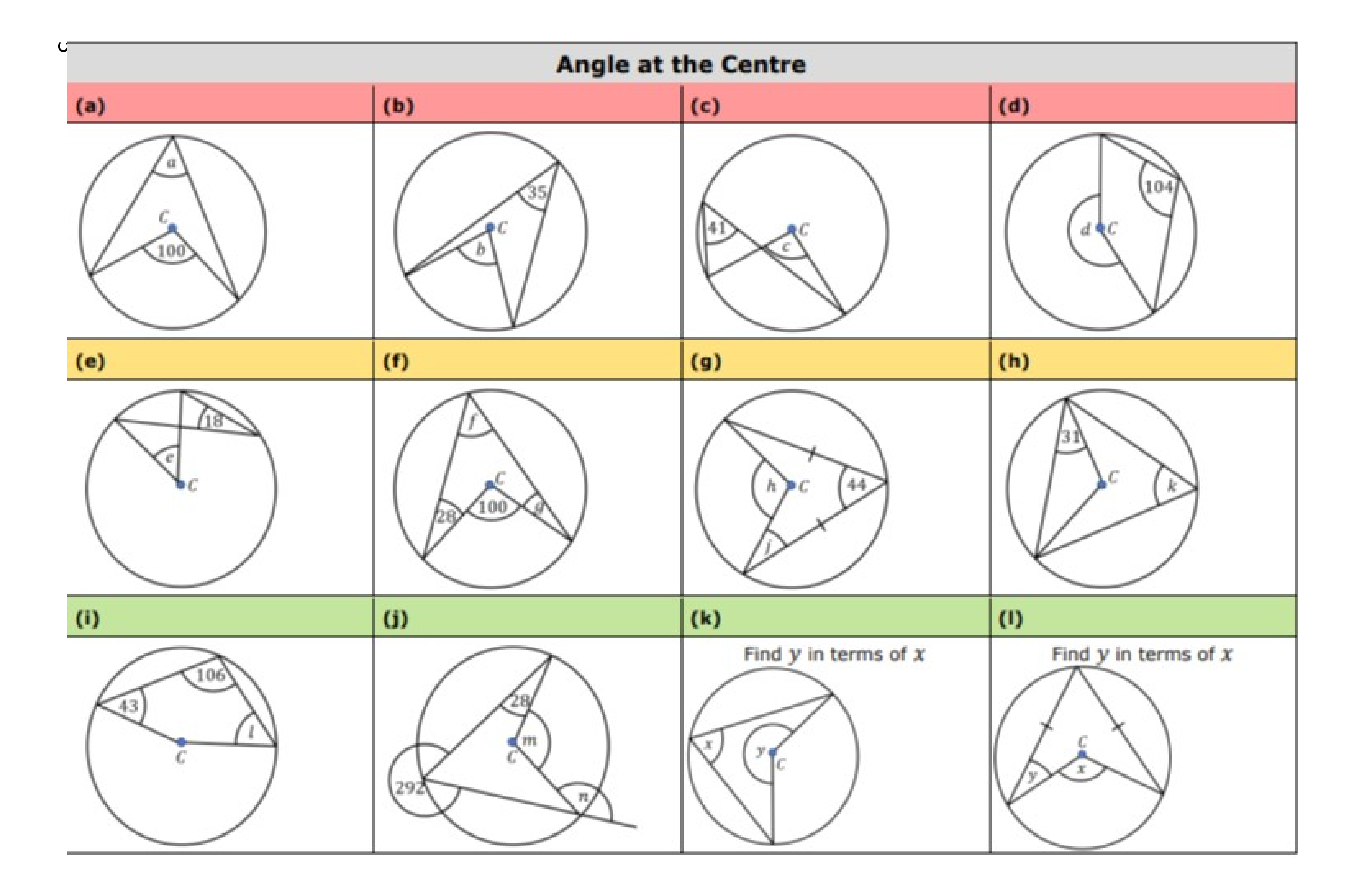
What did you notice?

More Investigating Triangles Inside Circles

The first three diagrams show four joined isosceles triangles that fit together inside a circle. Calculate all marked angles and write down what you notice about the shaded angles. In the final diagram, choose your own angles and test your theory.

What did you notice?


Circle Theorems and Quadrilaterals
(a)
Find the missing angle a.
105
a
80
72
(b)
Find the missing angles b and c.
112
c
65
b
(c)
Find the missing angle d.
d
44
205
38
(d)
What is the relationship between angles e and f?
f
C
e
(e)
What is the relationship between angles g and h?
g
C
h
(f)
Find the value of j.
109
C
j
(g)
Find the value of k.
66
C
k
(h)
Find the values of m and n.
n
101
C
95
m
(i)
Find the value of p.
108
C
p
(j)
Find the values of q and r.
97
r
q
C
(k)
Find the values of s and t.
71
105
C
t
s
(l)
Find the values of u and v.
C
u
154
v


Angle at the Centre
(a)
a
C
100
(b)
35
C
b
(c)
41
C
c
(d)
104
d
C
(e)
18
e
C
(f)
f
C
28
100
g
(g)
h
C
44
j
(h)
31
C
k
(i)
106
43
l
C
(j)
28
m
C
292
n
(k)
Find y in terms of x
x
y
C
(l)
Find y in terms of x
C
y
x